REMARKS

Claims 1-14 are pending. Claims 1-7 were rejected. Claims 8-10 were objected to as depending from rejected claim 7. Claims 11-14 are new.

Applicants have submitted formal drawings and added an abstract in accordance with the Examiner's requests.

The Examiner objected to informalities in claims 1, 4 and 8.

With regard to claim 1, Applicants respectfully submit that there are no informalities to correct. The driving circuit is controlled so as to connect and disconnect the first and second motors to the driving circuit in substantially out-of-phase synchronism, as recited. See, e.g., the specification at page 9, line 4 through page 10, line 4. After reviewing the specification, one skilled in the art would understand how to control a driving circuit to connect and disconnect the first and second motors in substantially out-of-phase synchronization. If Applicants have misunderstood the Examiner's concerns with claim 1, Applicants respectfully request the Examiner to contact the undersigned attorney so that appropriate clarifying amendments can be made to claim 1. Claims 4 and 8 have been amended to address the Examiner's concerns. No change in claim scope is intended by the amendments.

The Examiner rejected claims 2 and 7-10 under 35 U.S.C. § 112 as indefinite due to the use of the phrase "or the like." Applicants have replaced the phrase "a disk drive" with the broader phase "a data storage device" and deleted the use of "or the like." No change in claim scope is intended by these amendments.

The Examiner rejected claims 1-7 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,679,102 issued to Wevers, et al. Applicants respectfully traverse the Examiner's contention that Wevers is an anticipating reference.

Claim 1 recites "the driving circuit is controlled so as to connect and disconnect the first and second motors to the driving circuit in substantially out-of-phase synchronism." The Examiner points to spindle motor 27 as the first motor, stepper motor 30 as the second motor, and microprocessor 40 as the driver circuit, citing Wevers at column 1, lines 65-68, column 2, lines 1-26, and column 3, lines 10-53. The cited portions of Wevers discuss disabling the normal stepper motor control circuitry 40, 42, 44 and instead enabling stepper motor retract

sequencer 50 and stepper motor power driver 52 in the event of a power failure. During a power outage, the spindle motor 27 is always connected to the "spindle motor back EMF power source" 54, which is used to supply power for the stepper motor retract power driver 52. There is no discussion of connecting *and* disconnecting the spindle motor 27 and the stepper motor 30 to the microprocessor 40 (or to spindle motor back EMF power source 54) in a "substantially out-of-phase synchronization" during a power failure. Thus, the cited portions of Wevers do not teach or suggest connecting and disconnecting "the first and second motors to the driving circuit in substantially out-of-phase synchronism" as recited in claim 1.

Independent claim 3 recites "the spindle motor and positioning motor are switched on and off from the driving circuit substantially in out-of-phase synchronism." The Examiner points to spindle motor 27 as the first motor, stepper motor 30 as the second motor, and to "spindle motor back EMF power source" 54 as the driver circuit, citing Wevers at column 1, lines 65-68, column 2, lines 1-26, and column 3, lines 10-53. In Wevers, when the spindle motor 27 is driven under normal conditions, it is driven at a constant rotation. See Column 3, lines 29-31. When an alarm signal DC-UNSAFE goes true, "spindle motor back EMF power source" 54 supplies power to the stepper motor 30. There is no suggestion that spindle motor 27 is switched on and off when the alarm signal DC-UNSAFE goes true. There is no discussion or suggestion of turning on and off the spindle motor 27 at all. Accordingly, Wevers does not disclose or suggest "the spindle motor and positioning motor are switched on and off from the driving circuit substantially in out-of-phase synchronism" as recited in claim 3.

Independent claim 6 recites "chopping connection between the positioning motor and driving circuit at least substantially synchronized out-of-phase with the chopping of the spindle motor connection." Independent claim 7 as amended recites "chopping connection between the driving circuit and the spindle and positioning motors respectfully in a substantially synchronised out-of-phase manner." While not identical in language or scope, independent claims 6 and 7 are not anticipated by Wevers because Wevers does not disclose "chopping" of a connection to the spindle motor substantially synchronized out-of-phase with "chopping" of a connection to the positioning motor. Instead, as discussed above, Wevers simply disables the

normal stepper motor control circuitry, 40-44, and leaves the spindle motor 27 connected to the "spindle motor back EMF power source" 54.

Claim 2 depends from claim 1 and claims 4-5 depend from claim 3. Accordingly, Applicants respectfully submit that claims 1-7 are not anticipated by Wevers.
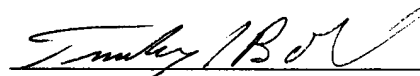
The Examiner is thanked for indicating that claims 8-10 contain allowable subject matter and would be allowable if restated in independent form. Applicants have restated claim 8 in independent form. Claims 9 and 10 depend from claim 8. Accordingly, Applicants submit that claims 8-10 are allowable.

New claims 11-14 have been added. Care has been taken to avoid the introduction of new matter.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC

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TLB:rg

Enclosure:
Postcard
4 Sheets of Replacement Drawings (Figs. 1-4)

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